

Section 4-2: Problem Solving Skills: Simulations

By the end of this lesson, you should be able to answer:

- How are simulations used to relate probabilities?

Where you might see this in the real world:

- Music, market research, games, statistics, probability

Define the following terms:

1. Act It Out

2. Simulation

In order to complete a simulation, we need to have a manipulative (an object that we can physically work with) to help us act out the experiment. Often times this is done with a coin, dice, or a spinner. Luckily for us, we don't need to have any of these items, as we have **Probability Simulation** to use in our TI-84s!

In order to access **Probability Simulation**, we need press the **APPS** button, then find **Prob Sim**. Press **ENTER** twice to bring up the menu of different simulations. In this lesson, we will be exploring the different simulations together. **If you don't have a TI-84 or other graphing calculator at home to work with these simulations, you can always use a real coin, dice, spinner, or deck of cards.**

Example 1: Matt Mitarnowski has a batting average of .250. Design and run a simulation for his next ten at bats. Record your results. What is the probability that Matt gets exactly 3 hits?

What could we use as a simulation when the following ratios are given? Explain how you would set up your simulation.

a. 1:2

b. 1:4

c. 1:6

Problem Set:

"If you tell the truth you don't have to remember anything." – Mark Twain